

Appl. No.: 10/728,349

Amdt. dated 11/18/2005

Reply to Office action of June 28, 2005 and the Advisory Action dated September 12, 2005

Amendments to the Claims:

Please amend Claims 1, 5, and 10 as follows:

1. (currently amended) A method for communicating between a bus controller and at least one data channel via a common digital bus, the method comprising:

communicating between a bus controller and at least one data channel using a first bit rate;

transmitting a first message from the bus controller to the at least one data channel at a predetermined second bit rate, wherein the predetermined second bit rate is selected from a predetermined number of different plurality of possible bit rates that may be used to communicate on the common digital bus;

receiving the first message at the at least one data channel;

analyzing the first message at each of the predetermined number of different bit rates upon receipt of the first message by the at least one data channel;

determining from the predetermined number of different plurality of possible bit rates that the first message is being transmitted at the second predetermined bit rate at which the first message was transmitted upon receipt of the first message by the at least one data channel, where the determination is made independent of a synchronous clock signal from the bus controller; and

transmitting a second message from the at least one data channel to the bus controller in response to the first message at the second same predetermined bit rate.

2. (original) A method according to Claim 1 further comprising receiving the second message at the bus controller at the same predetermined bit rate independent of a synchronous clock signal.

3. (previously presented) A method according to Claim 1, wherein the first message is an example message, which is used by said determining step to determine the predetermined bit rate.

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4. (canceled).

5. (currently amended) A system for facilitating communications between a bus controller and at least one data channel via a common digital bus, the system comprising:
a bus controller connected to said common digital bus; and
a network device interface connected between the common digital bus and an associated data channel,

wherein said bus controller transmits a first message to said network device interface at a predetermined bit rate selected from a predetermined number of different plurality of possible bit rates that may be used to communicate on the common digital bus,

wherein said network device interface:

receives receiving the first message;
analyzes the first message at each of the predetermined number of different bit rates; and

determines from the predetermined number of different plurality of possible bit rates the predetermined bit rate at which the first message was transmitted upon receipt of the first message independent of a synchronous clock signal from said bus controller,

wherein said network device interface transmits a second message to said bus controller in response to the first message at the same predetermined bit rate, and

wherein said bus controller is capable of altering alters the predetermined bit rate to another of the predetermined number of different bit rate at which said bus controller transmits messages to said network device interface.

6. (previously presented) A system according to Claim 5, wherein said bus controller receives the second message at the bus controller at the same predetermined bit rate independent of a synchronous clock signal.

7. (previously presented) A system according to Claim 5, wherein the first message transmitted by said bus controller is an example message, and wherein said network device interface uses the example message to determine the predetermined bit rate.

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8. (canceled).

9. (original) A system according to Claim 5, wherein said network device interface uses the predetermined bit rate to communicate with the data channel associated therewith.

10. (currently amended) A network device interface adapted to interconnect a bus controller with an associated data channel via a common digital bus, the network device interface comprising:

a receiver for receiving messages from the bus controller via the common digital bus, wherein said receiver communicates with the bus controller at a selected bit rate selected from a predetermined number of different bit rates;

a device interface for providing commands to the associated data channel in response to messages received by said receiver and for receiving data from the associated data channel; and

a transmitter for transmitting messages to the bus controller via the common digital bus, wherein said receiver comprises a clock detector for determining if synchronous clock signals are provided with the message and a bit rate detector for determining the selected a bit rate from the predetermined number of different bit rates at which the messages are received,

wherein said device interface analyzes the message sent by the bus controller at each of the predetermined number of different bit rates and determines from the predetermined number of different bit rates the bit rate at which the message is being transmitted.

wherein said transmitter transmits messages at the selected same bit rate at which messages are received, if said clock detector determines that the messages that are received are without any accompanying synchronous clock signals, and wherein said transmitter is capable of altering the bit rate at which messages are transmitted to another one of the predetermined number of different bit rates in accordance with a determination that alterations of the bit rate at which messages are received has been altered to another one of the predetermined number of different bit rates.

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11. (previously presented) A network device interface according to Claim 10 wherein the first message is an example message from the bus controller and said bit rate detector uses the example message to determine the predetermined bit rate.